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**TRANSMITTAL  
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(to be used for all correspondence after initial filing)

Application Number	10/645,306
Filing Date	August 21, 2003
First Named Inventor	Choi, Byung-Jin
Art Unit	1763
Examiner Name	Unassigned
Attorney Docket Number	P86/MII-46-28-03

Total Number of Pages in This Submission

**ENCLOSURES (Check all that apply)**

- |  |   |   |
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| <input type="checkbox"/> Fee Transmittal Form                                | <input type="checkbox"/> Drawing(s)   | <input type="checkbox"/> After Allowance communication to Technology Center (TC)        |
| <input type="checkbox"/> Fee Attached  | <input type="checkbox"/> Licensing-related Papers                                       | <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences     |
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| <input type="checkbox"/> After Final   | <input type="checkbox"/> Petition to Convert to a Provisional Application               | <input type="checkbox"/> Proprietary Information  |
| <input type="checkbox"/> Affidavits/declaration(s)                           | <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address | <input type="checkbox"/> Status Letter  |
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| <input type="checkbox"/> Express Abandonment Request                         | <input type="checkbox"/> Request for Refund   | Form 1449 - IDS   |
| <input checked="" type="checkbox"/> Information Disclosure Statement         | <input type="checkbox"/> CD, Number of CD(s) _____                                      | Sixty (60) References   |
| <input type="checkbox"/> Certified Copy of Priority Document(s)              | <b>Remarks</b>  | Return Receipt Postcard to Kenneth Brooks   |
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**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm or Individual name	Law Office of Kenneth C. Brooks
Signature	<i>Kenneth C. Brooks</i>
Date	February 23, 2004

**CERTIFICATE OF TRANSMISSION/MAILING**

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Typed or printed name	Alexis Sheffield		
Signature	<i>Alexis Sheffield</i>	Date	February 23, 2004

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Choi et al.  
Serial No.: 10/645,306  
Filing Date: 08/21/2003  
For: CAPILLARY IMPRINTING TECHNIQUE

PATENT APPLICATION  
Group Art Unit: 1763  
Examiner: Unassigned

INFORMATION DISCLOSURE STATEMENT

Commissioner  
for Patents  
Alexandria, VA 22313-1450

Sir:

The following information is submitted in compliance with Applicants' duty of disclosure under 37 C.F.R. § 1.56. Form PTO-1449 and a copy of each reference recited below accompanies this document. It is respectfully requested that the cited information be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

ISSUED PATENTS

<u>Patent Number</u>	<u>Inventor</u>	<u>Grant Date</u>
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6,334,960	Willson et al.	01/01/2002
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10/194,410	Sreenivasan et al.	07/11/2002
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<u>Document No.</u>	<u>Inventor</u>	<u>Pub. Date</u>
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- Krug, Herbert et al. "Fine Patterning of Thin Sol-Gel Films," *Journal of Non-Crystalline Solids*, pp. 447-450, 1992.
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- Scheer, H.C. et al. "Problems of Nanoimprinting Technique for Nanometer Scale Pattern Definition," *Journal of Vacuum Science and Technology*, vol. 16, pp. 3917-3921, 1998.
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Chou, Stephen et al. "Lithographically-induced Self Assembly of Periodic Micropillar Arrays," *Journal of Vacuum Science and Technology*, vol. 17, pp. 3197-3202, 1999.

Ruchhoeft, P. et al. "Patterning Curved Surfaces: Template Generation by Ion Beam Proximity Lithography and Relief Transfer by Step and Flash Imprint Lithography," *Journal of Vacuum Science and Technology*, vol. 17, pp. 2965-2982, 1999.

Bender, M. et al. "Fabrication of Nanostructures Using a UV-based Imprint Technique," *Microelectronic Engineering*, pp. 223-236, 2000.

Choi, B.J. et al. "Design of Orientation Stages for Step and Flash Imprint Lithography," *Precision Engineering*, vol. 25, pp. 192-199, 2001.

Nguyen, A. Q. "Asymmetric Fluid-Structure Dynamics in Nanoscale Imprint Lithography," University of Texas at Austin, August 2001.

CERTIFICATE OF MAILING

Respectfully Submitted,

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Signed:

Typed Name: Alexis Sheffield

Date: Feb. 23, 2004

Respectfully,

Kenneth C. Brooks  
Reg. No. 38,393

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Austin, Texas 78708-1536  
Telephone: 512-527-0104  
Facsimile: 512-527-0107  
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Substitute for form 1449A/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet

1

of

5

**Complete if Known**

Application Number	10/645,306
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<b>Filing Date</b>	08/21/2003
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<b>First Named Inventor</b>	Choi et al.
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Group Art Unit	1763
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Examiner Name	Unassigned
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Attorney Docket Number	P86/MII-46-28-03
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## U.S. PATENT DOCUMENTS

[illegible]

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<sup>1</sup>Unique citation designation number. <sup>2</sup>See attached Kinds of U.S. Patent Documents. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

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				Application Number	10/645,306
				Filing Date	08/21/2003
				First Named Inventor	Choi et al.
				Group Art Unit	1763
				Examiner Name	Unassigned
Sheet	3	of	5	Attorney Docket Number	P86/MII-46-28-03

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	A32	COWIE, "Polymers: Chemistry and Physics of Modern Materials," 1991, pp. 408-409, 2 <sup>nd</sup> Ed, Chapman and Hall, a division of Routledge, Chapman and Hall, Inc., 29 West 35 <sup>th</sup> Street, NY, NY 10001-2291.	
	A33	KRUG et al., "Fine Patterning of Thin Sol-Gel Films," Journal of Non-Crystalline Solids, 1992, pp. 447-450, vol. 147 & 148.	
	A34	Kotachi et al., "Si-Containing Positive Resist for ArF Laser Lithography," J. PhotopolymerSci. Tevhnlol. 8(4) 615-622, 1995.	
	A35	Krauss et al., "Fabrication of Nanodevices Using Sub-25nm Imprint Lithography," Appl. Phys. Lett 67(21), 3114-3116, 1995	
	A36	CHOU et al., "Imprint of Sub-25 nm Vias and Trenches in Polymers," Applied Physics Letters, November 20, 1995, pp. 3114-3116, vol. 67(21).	
	A37	CHOU et al., "Imprint Lithography with 25-Nanometer Resolution," Science, Apr. 5, 1996, pp. 85-87, vol. 272.	
	A38	HAISMA et al., "Mold-Assisted Nanolithography: A Process for Reliable Pattern Replication," Journal of Vacuum Science and Technology, Nov/Dec 1996, pp. 4124-4128, vol. B 14(6).	
	A39	CHOU et al., "Imprint Lithography with Sub-10nm Feature Size and High Throughput," Microelectronic Engineering, 1997, pp. 237-240, vol. 35.	
	A40	SCHEER et al., "Problems of the Nanoimprinting Technique for Nanometer Scale Pattern Definition," Journal of Vacuum Science and Technology, Nov/Dec 1998, pp. 3917-3921, vol. B 16(6).	
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	A42	XIA et al., "Soft Lithography," Agnew. Chem. Int. Ed., 1998, pp. 550-575, vol. 37.	

Examiner Signature		Date Considered	
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				Filing Date	08/21/2003
				First Named Inventor	Choi et al.
				Group Art Unit	1763
				Examiner Name	Unassigned
Sheet	4	of	5	Attorney Docket Number	P86/MII-46-28-03

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	A43	WU et al., "Large Area High Density Quantized Magnetic Disks Fabricated Using Nanoimprint Lithography," Journal of Vacuum Science and Technology, Nov/Dec 1998, pp. 3825-3829, vol. B 16(6).	
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	A45	CHOU et al., "Lithographically-Induced Self Assembly of Periodic Polymer Micropillar Arrays," Journal of Vacuum Science and Technology, Nov/Dec 1999, pp. 3197-3202, vol. B 17(6).	
	A46	RUCHHOEFT et al., "Patterning Curved Surfaces: Template Generation by Ion Beam Proximity Lithography and Relief Transfer by Step and Flash Imprint Lithography," Journal of Vacuum Science and Technology, 1999, pp. 2965-2982, vol. 17.	
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	A51	BENDER M. et al., "Fabrication of Nanostructures using a UV-based Imprint Technique," Microelectronic Engineering, pp 223-236, 2000.	
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	A53	CHOI et al., "Method and System of Automatic Fluid Dispensing for Imprint Lithography Processes," U.S. Patent Application 09/908,455, Filed with USPTO on July 17, 2001.	

Examiner Signature		Date Considered	
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Sheet	5	of	5	Attorney Docket Number	P86/MII-46-28-03

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	A54	CHOI et al., "Methods for High-Precision Gap and Orientation Sensing Between a Transparent Template and Substrate for Imprint Lithography," U.S. Patent Application 09/920,341, Filed with USPTO on August 1, 2001.	
	A55	Nguyen, A. Q., "Asymmetric Fluid-Structure Dynamics in Nanoscale Imprint Lithography," University of Texas at Austin, August 2001.	
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